The general purpose of building department operations is to establish and enforce minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress, stability, sanitation, adequate light and ventilation, energy conservation, systems efficiency, and property protection. This purpose, however, is framed within a larger system which includes customers, personnel, service operations and financial resources. The key to effective department management is aligning these components into a streamlined framework where regulations are consistently enforced in a cost-effective and efficient environment garnering both customer and employee satisfaction.

Taking a closer look at the system resources, we know that for the system to operate effectively and efficiently customers need to feel that they are receiving a high level of service. Even though these services stem from required regulations which in and of themselves can be perceived as arbitrary by clients, there is no reason that delivery cannot be helpful and timely. Another important system resource is competent personnel experiencing a high level of job satisfaction. On the operational side, services can be broken down into distinct core processes—the principal ones typically found in building departments include building permit issuance, building inspections and code enforcement. Analyzing operations in terms of processes allows for improvements through established quality methodologies, which will be further addressed. Finally, the most important system resource is financial stability which makes most other resources possible.

We thus have the four precepts requisite for building the strategic environment: customers, employees, processes and financial stability (the term “strategic” is used to reflect the set of managerial decisions and actions determining the long-term performance of an organization). To complete the exercise, these precepts need to be woven into individual goals which will form the tapestry through which all organizational assessments and improvements will be viewed.

Building department strategic goals can therefore be stated as:

• to provide excellent customer service,
• to invest in employees,
• to continuously improve processes and
• to enhance department financial stability.

Toward Controlling Processes

The next step in the quest for improved department administration is controlling the operations. The three core processes typically found in building departments have been identified to include building permit issuance, building inspections and code enforcement. Building inspections can serve as an example of how one might bring that operation under “control” (in this sense used to mean that one is able to measure the performance of the process and that the measured performance is consistent over time).

In order to maximize the understanding and leverage of the building inspections process, an inspection process team should be created consisting of line inspectors and supervisors as well as stakeholders such as plans examiners interacting within the process. Forming an employee-driven process team in this manner creates an environment for self-motivation where leadership can flourish at all levels of the organization. Employee adoption of quality principals is fostered through use of systematic methods that are taught and applied incrementally in team environments. Such methods include process mapping, project management and basic analytical techniques. Active participation and responsibility in applying these methods can create enthusiasm as employees’ creative problem-solving leads to concrete actions, measurable results and recognition.

The first step the process team needs to tackle is defining how the process actually operates. Inputs into the process, tasks and responsibilities are all considered along with the links among them. In terms of inspection, one of the first inputs into the process would be a customer request for inspection and one of the first tasks would be to review and organize inspection requests. The person responsible for
this task may be a clerical support staff member. The process team thus proceeds to identify all inputs, tasks and responsibilities comprising the process; determines how these are linked; and arranges them into a map reflecting the actual operation.

During the mapping stage, areas of potential improvement (“red clouds”) are identified and noted. The map forms the basis for defining the environment by standardizing operations and procedures. The “red clouds” are then categorized and prioritized to seek opportunities for future improvements. If operations truly reflect the mapped process, the process can be considered to be under control (this can be verified if the process metrics produce consistent values). If the map has not captured the operation in its entirety or if consistency among staff members in the application of the process is lacking, these issues need to be mitigated prior to implementing any attempted improvements. Controlling the process is an essential first step without which the effects of any improvements cannot be gauged. Employing a process-based model in this manner delegates authority to the team for the continuous improvement effort.

Baseline Metric Assessment
The next step in the continuous improvement process is to identify process performance measures such as time, quality and—if appropriate—the financial situation. These measures or “metrics” will provide the ability to gauge the performance of the process at any given time as well as confirm the effects of any changes made to the process when testing or implementing improvements. Time and quality are typically harnessed as core metrics because they span across the strategic goals.

In the building inspection process a time metric could be the percentage of inspections completed the first business day following a customer’s request, and a quality metric could be the percentage of inspections approved on the first pass. The latter metric illustrates the fact that quality spans the entire client/inspection spectrum and, in this example, should not be limited to those factors under the sole control of the inspector. One could inflate this metric value by simply approving more inspections, but if the actual job did not warrant the inspection being approved the metric performance deviates from quality: quality only improves when more inspections which warrant approval are approved.

(continued)
Root-cause analysis can shed some light on how this metric performance can be enhanced through factors such as consistency among inspectors, education of contractors regarding preparation for an inspection, and field access to inspection history or detailed permit conditions. Departments should create systems for the automated generation of metric performance data to provide dashboard indicators to managers and line staff demonstrating real-time process performance.

Aligning the Operational with Strategic

Root-cause analysis is not just useful in identifying core metrics: it is essential in seeking opportunities to move beyond the superficial and dig deeper into the underlying causes behind “red clouds.” Consider the high inspection workload experienced by many departments. It is tempting to jump to the conclusion that a high workload can best be mitigated by hiring more inspectors. However, this might not be the case because hiring more inspectors may simply contribute to other problems such as increased inconsistency among inspectors, financial resource limitations and general coordination issues. Rather, an investigation should be undertaken to positively determine the underlying causal factors.

For example, if the quality metric for the percentage of inspections approved on the first pass is at about 50 percent it means that inspectors are conducting more re-inspections than initial inspections (assuming that not all re-inspections are approved the first time). This problem is further exacerbated if the jurisdiction covers a large geographical area, resulting in significant increases in time and costs associated with transportation. Note that contractors obviously do not benefit from a high reinspection rate either, so this area presents a real opportunity for improvement across the entire inspection/client spectrum.

Once the process is under control and the baseline data has been established one can set a performance target like: “80 percent of inspections will be approved on the first pass.” Projects can then be undertaken to improve consistency among inspectors or to educate clients so that inspections are not called for before jobs meet the standards of the jurisdiction. Such projects are the engine driving the continuous improvement machine. Multiple formal project management techniques are available to help ensure success, and all employ a similar empirical model whereby the project:

• aligns with strategic goals;
• defines scope, time and cost constraints;
• designs and validates a plan for creating deliverables;
• tracks project to conclusion, typically placing it into production; and
• evaluates the impact of implemented deliverables.

Projects operating within the above framework can be used to improve processes in line with strategic goals. Even projects not resulting in a significant performance gain are beneficial in the sense that they close unproductive avenues and provide further insight into how the process operates. Testing assumptions in this manner is a valid and essential component of continuous improvement. Successful projects are implemented and the process team captures all such changes within the process map prior to proceeding to the next opportunity. In this sense, improvement is truly a continuous process.

Conclusion

While at first glance this approach might appear to be prohibitively labor-intensive, continuous improvement provides for a dynamic and diverse professional context once incorporated into the organizational culture. This contributes to staff innovation as well as creating a more efficient and effective process-based environment which can significantly enhance employee job satisfaction, customer service and department financial stability.

Just from a human resources standpoint alone, encouraging employees throughout your department to inspire each other with a shared vision and empowering them to exercise individual leadership skills can dramatically transform your jurisdiction’s building community for the better. That is the point at which the operational aligns with the strategic to everyone’s benefit.

Yves Khawam, Ph.D., is an ICC-certified Master Code Professional and Chief Building Official for Pima County, Arizona.

Carmine DeBonis Jr., MBA, is Development Services Director for Pima County, Arizona.